

ON THE TYPIFICATION OF
SPARTINA CAESPITOSA — A REPLY

MARK J. McDONNELL AND GARRETT E. CROW

In an article "On the Process of Lectotypification" Rollins (this issue) rightly states that every active plant systematist should be thoroughly familiar with the process of lectotypification as set forth in the *International Code of Botanical Nomenclature* (1978). Contrary to Dr. Rollins' view, we very carefully followed the procedures outlined in the *Code* in the lectotypification of *Spartina caespitosa* A. A. Eaton (McDonnell & Crow, 1979), and remain assured we made the correct decision in selecting A. A. Eaton's specimen no. 501 (NEBC) to serve as the lectotype. Under Art. 8 of the *Code*, our choice cannot be superseded, since it was neither based on misinterpretation of the protologue nor made arbitrarily.

During our investigation of the taxonomic status of *Spartina caespitosa* we examined the Gray Herbarium collections, having been aware that the Herbarium of Alvah A. Eaton had been purchased by the Gray Herbarium. Included in the type collection was a specimen of *S. caespitosa* collected by A. A. Eaton and stamped TYPE. This was apparently stamped TYPE during the 1940's when staff, most likely under the direction of C. A. Weatherby or F. W. Hunnewell (Rollins, pers. comm), were searching for type specimens in the general collection.

Initially we did not question the appropriateness of this specimen to serve as the type. However, after we consulted the protologue (Eaton, 1898) a number of discrepancies arose. First, Eaton states that he made the original collection in Seabrook, N. H. on August 26, 1896, and then made an extended search on the 27th. The specimen in the Gray Herbarium stamped TYPE was collected on September 29, 1896, one month after the original collections. Furthermore, the only locality on the original label is "Jim Browns Pasture." There is no indication on the original label that this was collected in Seabrook, N. H., only a subsequent anonymous annotation, "Seabrook, N. H.," added above the label after it was purchased by the Gray Herbarium. A listing of Eaton's collecting localities compiled by his friend Raynold Dodge (in the Library of the Gray and Arnold Arboretum Herbaria) includes a "John Brown's, Hampton Falls, N. H." and the localities file in the New

England Botanical Club Herbarium adds a "Johnny Brown's meadow, Seabrook, N. H.," but we have been unable to confirm the location of a "Jim Browns Pasture." It is quite possible that this specimen was collected in one of the above localities. (Field studies revealed *Spartina caespitosa* growing at the upper edges of the salt marsh on both sides of Brown's Creek, which forms the boundary between Hampton Falls and Seabrook.) However, it is simply impossible to determine where the specimen was collected without the specific town originally included on the label.

Since the Gray Herbarium specimen stamped TYPE clearly is not the holotype nor was it ever formally designated as the lectotype, we carefully followed the recommendation of the *Code* and sought to locate all of Eaton's specimens of *Spartina caespitosa* in order to find the holotype, and then in the absence of one, to select from Eaton's original material a specimen to designate formally as the lectotype.

Rollins suggests that one "sure way" of finding elements studied by the author of a taxon is to consult material of the author's herbarium now housed in an institution, and therefore believes that the Eaton specimen in the Gray Herbarium stamped TYPE should be the lectotype primarily because it was part of Eaton's herbarium when it was purchased by the Gray Herbarium. However, the *Code* states that it must be selected from the author's original material and that "In choosing a lectotype, all aspects of the protologue should be considered as a basic guide" (p. 75). In addition to the lack of a specific locality on the label of the Gray Herbarium specimen, the spelling of the epithet on the label, "*cespitosa*" contrasts with Eaton's spelling, "*caespitosa*" in the protologue and adds an element of doubt as to whether this specimen was definitely studied by the author up to the time the name of his taxon was published.

In the protologue Eaton (1898) gives us additional choices, stating ". . . one tussock at Seabrook, N. H., Aug. 26, 1896, species subsequently traced on both sides of marsh from Hampton, N. H., on the north, to Ipswich, Mass., on the south, most abundant at the causeway, Salisbury, Mass." Three other of Eaton's specimens in the Gray Herbarium, dated August 29, 1896, are from Plum Island, Massachusetts (within the range included in the protologue), but these do not have A. A. Eaton's original label and thus there is always an element of doubt as to whether these specimens were actually studied by the author.

Of all the extant specimens of *Spartina caespitosa* collected by Eaton only one, *Eaton 501* (NEBC), can best serve as the lectotype. (A critical analysis of the morphology of all of Eaton's original material suggests his original description was based on a number of specimens.) The date on the label is August 26, 1896, coinciding with the date cited in the protologue. Additionally the specimen has a special printed label:

Ex. Herb. ALVAH A. EATON
Spartina caespitosa A. A. Eaton
 TYPE SPECIMEN

and written on the label, *in Eaton's own hand*, is "First collection, one root in Hampton Falls, N. H." (see fig. 1, McDonnell & Crow, 1979). The presence of a special printed label with the inclusion of "TYPE SPECIMEN" on it strongly suggests that Eaton regarded this as particularly characteristic of his new taxon (even though Eaton's concept of a type specimen was not the same concept of the present *Code*). An examination of many Eaton specimens (including other taxa) revealed only very few labels with this designation. Everything about *Eaton 501* (NEBC)¹ agrees well with the protologue: its morphology, the spelling of the epithet on the label, the date cited, and the locality (Hampton Falls locality being included in "... both sides of the marsh ..."). There is no doubt that this specimen was part of the original material Eaton used to describe *Spartina caespitosa* as a new species.

LITERATURE CITED

- EATON, A. A. 1898. Two new species. *Bull. Torrey Bot. Club* **25**: 338-341.
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¹It is quite possible that *Eaton 501* (NEBC) came to the New England Botanical Club Herbarium as a transfer from the Gray Herbarium. Rollins (this issue) notes that at the time Eaton's herbarium was incorporated into GH collections some 354 sheets were transferred to NEBC with an additional 66 sheets transferred later in the year.

M. J. M.

DEPARTMENT OF BOTANY
RUTGERS UNIVERSITY
NELSON BIOLOGICAL LABORATORIES
PISCATAWAY, NJ 08854

G. E. C.

DEPARTMENT OF BOTANY AND PLANT PATHOLOGY
NESMITH HALL
UNIVERSITY OF NEW HAMPSHIRE
DURHAM, NH 03824